



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Takao SAITO et al.

Group Art Unit: 1762

Application No.: 10/766,806

Examiner: B. CHEN

Filed: January 30, 2004

Docket No.: 115556

For: METHOD AND SYSTEM FOR PRODUCING THIN FILMS

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In reply to the March 1, 2007 Office Action, reconsideration of the rejection is respectfully requested in light of the following remarks.

Claims 1-13 are pending in this application. Claims 5-8 have been previously withdrawn as being directed to a non-elected group of claims. In accordance with MPEP §821.04(b), upon the allowance of claims 1-4 and 9-13, Applicants respectfully request the rejoinder and allowance of claims 5-8, which require all of the limitations of allowable claims 1-4 and 9-13.

The Office Action, on page 2, rejects claims 1-4 and 9-13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,693,376 to Fetherston et al. (hereinafter "Fetherston"). The Fetherston reference has been previously applied in the September 16, 2005 Office Action. The Amendment, filed December 14, 2005, adequately presented persuasive arguments to traverse this prior art rejection, as indicated by withdrawal of the

rejection. Therefore, Applicants respectfully submit that this rejection over Fetherston is improper.

Applicants submit, as previously presented, that Fetherston teaches a method for plasma source ion implantation and deposition for a cylindrical surface. As such, Fetherston is nonanalogous art with respect to plasma chemical vapor deposition as recited in the subject matter of the pending claims. Additionally, the Office Action concedes that Fetherston does not teach an inner space diameter of 0.9 millimeters or smaller. The Office Action asserts that one skilled in the art, after reading Fetherston, would realize that the process could be applied to smaller objects depending on the desired final product. This assertion is incorrect for the following reasons.

As discussed in Applicants' disclosure, in at least paragraph [0014], when the diameter of the space is 10 millimeters or smaller, it is difficult to form a thin film on the inner wall surface facing the space. As such, it would not have been obvious to one skilled in the art after reading Fetherston to simply apply the subject matter of the pending claims to smaller objects, *i.e.*, an inner space diameter of 0.9 millimeters or smaller.

Additionally, the Office Action concedes that Fetherston fails to teach the specific pulse width in pulse voltage. The Office Action states that Fetherston's reference clearly teaches the use of overlapping ranges and that overlapping ranges are *prima facie* evidence of obviousness. Unfortunately, the Office Action is incorrect in this assertion. Fetherston does not teach overlapping ranges. Instead, Fetherston teaches a high voltage power source applying an electric field in a range of 5 kilovolts to 100 kilovolts (col. 5, lines 65-67). Therefore, Fetherston cannot reasonably be considered to teach, or to have suggested, the features as positively recited in at least independent claim 1, that the high voltage pulse source applied an electric field in a range of 20 to 200 kilovolts per meter, as positively recited in pending claim 1. As such, the electric field of 5 to 100 kilovolts of Fetherston does

not overlap with 20 to 300 kilovolts per meter of claim 1. These values, as taught by Fetherston, are lower and upper limits of voltage, and not electric field intensity, supplied by the voltage source. For example, according to col. 9, lines 31-46, and Fig. 1 of Fetherston, the voltage is applied between the target 29 and electrode 230. If the dimension of the space between target 29 and electrode 230 would have been reduced to 0.9 millimeters as suggested by the Examiner, (5 to 100) kilovolts per 0.9 millimeters would have been 5,560 to 111,110 kilovolts per meter, which is considerably larger than the subject matter of the pending claims, *i.e.*, 300 kilovolts per meter. Therefore, the Office Action fails to assert a *prima facie* case of obviousness with respect to the applied prior art reference.

For at least the above reasons, Fetherston cannot reasonably be considered to teach, or to have suggested, the combinations of all of the features recited in at least independent claims 1 and 5. Further, claims 2-4 and 6-13 would also not have been suggested by the applied prior art references for at least the respective dependence of these claims on allowable independent claims 1 and 5, as well as for the separately patentable subject matter that each of these claims recite.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-13 under 35 U.S.C. § 103(a) as being unpatentable over the applied prior art reference are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-13 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: May 30, 2007

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